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A SHORT COURSE FOR WATER WORKS OPERATORS¹

BY FREDERIC H. BASS²

The writer was asked to present to this meeting a plan for a short course for water works operators to be given at the University of Minnesota some time during the year convenient for the men who might feel that they would benefit from it.

Such a course, largely limited to the sanitary considerations, was offered in Texas through the joint efforts of the University of Texas and the State Board of Health. These courses were conducted in various parts of the great state and apparently were quite successful. If the Lone-Star State can do this, the North Star State can also.

There are 386 public water supplies serving municipalities in Minnesota, distributed as follows:

Surface water supplies.....	36, population 578,553
Ground water supplies.....	348, population 485,807
Mixed surface and ground.....	2, population 236,247

The full tabulation received from H. A. Whittaker of the State Board of Health is as follows:

Surface water supplies	
Filtered and disinfected.....	8, population 402,366
Disinfected only.....	10, population 549,786
No treatment.....	18, population 32,440
Ground water supplies	
No treatment.....	346, population 485,807
Disinfected.....	2, population 13,458
Mixed surface and ground supplies	
No treatment.....	1, population 1,549
Disinfected.....	1, population 234,698

¹ Read before the Minnesota Section on May 21, 1921. Discussion is desired and should be sent to the Editor.

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The Texas courses were announced to the operators and to Mayors and County Judges through the State Board of Health, and to the newspapers by the Texas Water Works Association. The subjects listed are:

- Bacteriology, Lectures and laboratory
- Chemistry, Lectures and laboratory
- Water Borne Diseases
- Geology of Underground Water
- Sedimentation and Filtration
- Rapid Sand Filters
- Slow Sand Filters
- Filter Operation
- Protection of Water Supplies
- Legal Responsibilities of Water Companies
- Chlorination of Water
- Boiler Room Economy
- Boiler Explosion
- Economic Management of Water Companies
- Discussion of Local Problems
- Waco Water Works System

No tuition or laboratory fees were charged, anyone interested might attend.

If such a course were to be given at Minnesota by the University, it would have to be under the direction of the Extension Division of the University, Dr. R. R. Price, Director. If any expense were incurred, a fee would be charged. The expense, however, ought not be greater than that required for the circulars of information, which might be met easily. Lecturers and demonstrations could of course be obtained free of charge. The University would furnish the place of meeting.

The writer would suggest that in case such a course is offered here that it be arranged conjointly by the University and the State Board of Health. It is also suggested that, in addition to the sanitary features, the elementary theory, illustrated by practical illustrations, of hydraulics, the theory and characteristics of pumps and elements of building construction be given. The subjects of prevention of waste, water rates, power rates, and possibly other pertinent problems might also be treated. These suggestions are made in view of the comparatively few purification plants in the State.

In conclusion, the writer would recommend that the Board of Directors formulate a course and take up the proposition with the

State Board of Health and the Director of the Extension Division of the University, with a view to offering such a course during the next year. A discussion of this short paper will in all probability bring out other desirable features which should be included, such as the licensing of operators, and instances showing the need therefor.

References to this subject, furnished by Mr. Birdsall are as follows:

Course given by Texas State Board of Health. See Public Health Reports, Dec. 17, 1920, p. 3043.

New Jersey License Law. See Eng. News-Record, Aug. 15, 1918, p. 322 (Gives text).

Mismanagement of filtration plants. See Abuse of Water Purification Plants, H. P. Letton, Eng. Rec., Dec. 27, 1913, p. 719.

Abuses in Water Filtration, G. H. Pratt, Eng. Rec., Jan. 4, 1913, p. 23.

Filters Balk at Operating Methods of City Fathers. Eng. Rec., Apr. 17, 1915, p. 500.

Mechanical Filtration. Eng. Rec., June 8, 1912, p. 617.

Licensing of Operators of Water and Sewage Treatment Plants (N. J.) re F. E. Daniels report. Eng. Rec. Editorial, July 11, 1914, p. 32.

The University of Texas Leads the way in giving a special Short Course for Water Works Operators. Eng. and Contracting, Dec. 10, 1919, p. 661. Editorial.